

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-12 (canceled).

13. (Currently amended) A polymer mixture containing at least one synthetic first polymer P(i) and at least one second polymer P(j) ~~and optionally a swelling agent for P(i) and/or P(j),~~

wherein the first polymer P(i) has a degree of polymerisation  $DP(P(i)) > 500$  and at least one type of crystallisable sequences A having a degree of polymerisation  $DPs(P(i))$  of these sequences  $> 20$ , and

wherein the second polymer P(j) is made up of the same monomer units as the sequences A of P(i) and the degree of polymerisation  $DP(P(j))$  of P(j) is  $20 < DP(P(j)) < 500$ ,

wherein and the polymer mixture comprising comprises a molecularly dispersed mixture containing P(i), and P(j) forms a network under heterocrystallisation,

wherein, under comparable processing conditions of P(i) and of P(i) + P(j), the quotient of the modulus of elasticity  $E(i, j)$  of P(i) + P(j) and the modulus of elasticity  $E(i)$  of P(i),  $E(i, j)/E(i)$  is  $>1.1$  and  $<4$

wherein P(i) or the sequences A of P(i) comprises a polyolefin selected from the group consisting of a polypropylene, polyethylene, VLDPE, LDPE, LLDPE, HDPE, HMWPE, UHMWPE and mixtures thereof, and

wherein P(j) is selected from the group consisting of n-alkanes  $C_nH_{2n+2}$ ; isoalkanes  $C_n$ ; cyclic alkanes  $C_nH_{2n}$ ; polyethylene wax; paraffins and paraffin wax of mineral

origin such as macrocrystalline, intermediate or microcrystalline paraffins, brittle, ductile, elastic or plastic microcrystalline paraffins; paraffins and paraffin wax of synthetic origin; hyper-branched alpha olefins; polypropylene wax and mixtures thereof.

14. (currently amended) The polymer mixture according to claim 13, wherein under comparable processing conditions of  $P(i)$  and of  $P(i) + P(j)$
- ~~a) the quotient of the modulus of elasticity  $E(i, j)$  of  $P(i) + P(j)$  and the modulus of elasticity  $E(i)$  of  $P(i)$ ,  $E(i, j)/E(i)$  is  $>1.1$  and  $<4$ , and/or~~
  - ~~b) the quotient of the yield stress  $sy(i, j)$  of  $P(i) + P(j)$  and the yield stress  $sy(i)$  of  $P(j)$ ,  $sy(i, j)/sy(i)$  is  $>1.1$  and  $<3.0$ , and optionally,~~
  - ~~c) if there is a fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% within the range  $1 < A(j) < 15$ , the quotient of the breaking elongation  $eb(i, j)$  of  $P(i) + P(j)$  and the breaking elongation  $eb(i)$  of  $P(i)$ ,  $eb(i, j)/eb(i)$  is  $>1.01$  and  $<1.5$ .~~
15. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>1.3$ ,  $sy(i, j)$  is  $> 1.2$  and  $eb(i, j)$  is  $> 1.03$ .
16. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>1.5$ ,  $sy(i, j)$  is  $> 1.3$  and  $eb(i, j)$  is  $> 1.05$ .
17. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>2.0$ ,  $sy(i, j)$  is  $> 1.5$  and  $eb(i, j)$  is  $>$

1.10.

18. (previously presented) The polymer mixture according to claim 13, wherein a quotient of the MFI(i, j) of the mixture of P(i) + P(j) and the MFI(i) of P(i),  $\text{MFI}(i, j)/\text{MFI}(i)$  is  $>1.2$  and  $<500$ .
19. (previously presented) The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>1.5$ .
20. (previously presented) The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>2.0$ .
21. (previously presented) The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>3.0$ .
22. (previously presented) The polymer mixture according to claim 13, wherein under comparable processing conditions of P(i) and of P(i) + P(j), the quotient of the crystallinity K(i, j) of P(i) + P(j) and the crystallinity K(i) of P(i),  $K(i, j)/K(i)$  is  $>1.03$  and  $<3$ .
23. (previously presented) The polymer mixture according to claim 22, wherein the quotient of K(i, j) and K(i) is  $>1.05$ .
24. (previously presented) The polymer mixture according to claim 22, wherein the quotient of K(i, j) and K(i) is  $>1.1$ .
25. (previously presented) The polymer mixture according to

- claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.2$ .
26. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $1 < A(j) < 90$ .
27. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $2 < A(j) < 85$ .
28. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $3 < A(j) < 80$ .
29. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $5 < A(j) < 75$ .
30. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<3 \times 10^{-2}$ , and  $P(j)$  has a degree of branching  $<5 \times 10^{-2}$ .
31. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<1 \times 10^{-2}$ , and  $P(j)$  has a degree of branching  $<1 \times 10^{-3}$ .
32. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<5 \times 10^{-3}$ , and  $P(j)$  has a degree of branching  $<1 \times 10^{-3}$ .
33. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<1 \times 10^{-3}$ ,

and P(j) has a degree of branching  $<1 \times 10^{-4}$ .

- 34. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a polydispersivity  $<30$ .
- 35. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a polydispersivity  $<20$ .
- 36. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a polydispersivity  $<10$ .
- 37. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a polydispersivity  $<5$ .
- 38. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>20$ .
- 39. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>30$ .
- 40. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>40$ .
- 41. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>50$ .
- 42. (cancelled)
- 43. (cancelled)

44. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.9, and a melting or dropping point in °C of >80.
45. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.925, and a melting or dropping point in °C of >100.
46. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.950, and a melting or dropping point in °C of >110.
47. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.970, and a melting or dropping point in °C of >120.
48. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.980, and a melting or dropping point in °C of >125.
49. (previously presented) The polymer mixture according to claim 13, wherein the polymer mixture in the form of a thermoplastic melt is prepared by means of a dispersively and distributively acting mixing system, especially by means of a double-screw extruder or a single-screw extruder with mixing section or a Buss-Ko kneader and optionally after preparation is present in the form of granules, pellets, powder, macro- or micro-fibres, as film, casting, continuous casting, extrudate, thermo-shaped part and the like.
50. (new) The polymer mixture according to claim 13, further comprising a swelling agent for at least one of P(i)

and  $P(j)$ .

51. (new) The polymer mixture of claim 14, wherein, if there is a fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% within the range  $1 < A(j) < 15$ , the quotient of the breaking elongation  $eb(i, j)$  of  $P(i) + P(j)$  and the breaking elongation  $eb(i)$  of  $P(i)$ ,  $eb(i, j)/eb(i)$  is  $>1.01$  and  $<1.5$ .